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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,602	11/09/2006	Ulrich Carlin Nielsen	SCAN1-41253	1498
116 7590 05/15/2012 PEARNE & GORDON LLP 1801 EAST 9TH STREET SUITE 1200 CLEVELAND, OH 44114-3108			EXAMINER LEE, LAURA MICHELLE	
			ART UNIT 3724	PAPER NUMBER
			MAIL DATE 05/15/2012	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/599,602

Applicant(s)

NIELSEN, ULRICH CARLIN

Examiner

LAURA M. LEE

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2012.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 22-24, 26-28, 30-32, 34-41, 43, 45-48 and 50-54 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 22-24, 26-28, 30-32, 34-41, 43, 45-48 and 50-54 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/02/2012 has been entered. Claims 22-24, 26-28, 30-32, 34-40, 41, 43, 45-48, 50-54 are pending, claims 51-54 are new.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-24, 28, 32, 34-35, 37-41, 43-50 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hicks et al. (U.S. Patent 6,549,823), herein referred to as Hicks in view of Wygal et al. (U.S. Patent 5,784,937), herein referred to as Wygal and Demerin (U.S. Patent 3,841,186) and Sandberg (U.S. Patent 7,055,419). In regards to claim 22, Hicks discloses a method for portion cutting a flaccid food item (cheese) comprising the steps of: scanning at least one of a shape, a structure and/or a dimension of the flaccid food item at a first cutting stage by a measuring means (weighing and measuring station; height, width, length and weight measured; col. 1, lines 45-50); determining, using a processor (control processor CP), a portion cutting profile in connection with said scanning at the first cutting stage (col. 1, lines 50-53); cutting the flaccid food item into strips (11') at the first cutting stage (col. 1, lines 57-67) in accordance with said portion cutting profile; transporting said strips (11') from said first cutting stage to a second cutting stage (turntable; col. 2, lines 1-2); and cutting the strips into substantially rectangular pieces (13) of predetermined weight and/or dimension at said second cutting stage on the basis of additional scanning of at least one of a shape, a structure or a dimension of the strips at the second stage (col. 2, lines 2-12),

wherein said step of determining a portion cutting profile at the first cutting stage comprises determining a predetermined dimensions and/or weights for the cutting up of said strips into said substantially rectangular pieces of the basis of said at least one of a shape, a structure, and/or a dimension of said flaccid food item scanned at the first

cutting stage and on the basis of said predetermined weight and/or dimensions (col. 1, lines 54-58).

Hicks discloses that it is known to use the system with various types of cheese and that the weight and shape of the cheese block determines the portions of the end product. To the extent that it can be argued that cheese or a cheese block is not flaccid (e.g. not rigid or stiff) then attention is further directed to the Wygal and Demerin and Sandberg references. Wygal and Demerin and Sandberg are not all cited in combination with Hicks, rather they are cited as evidence as to the state of the art at the time of the invention. Wygal discloses a three dimensional food cutter for cutting a block of food into cubes. Wygal discloses that the apparatus can be used for cutting boneless food products such as meats, fowl, fish, and prepared meats, such as sausages and roasts. Where the block of food is first sliced and then cut into cubes. Sandberg discloses a method of optimizing yield from a slicing apparatus that includes scanning and weighing a slab or loaf and then dividing the loaf into a desired preselected portion weight to determine the number of slices to be made. Sandberg discloses that the slicing process can be incorporated for use with cheese, meat, and pressed or molded meat products. Demerin discloses a process for pork breasts into substantial equal weight by adjusting the spacing of the cutters to first cut the breasts into slices and then into cubes. As the prior art as shown multiple instances of portion cutting various flaccid food items, or meats, fish, cheese, etc, into cubes, it similarly would have been obvious to one having ordinary skill in the art to have utilized a cutting method as similarly taught by Hicks on a piece of flaccid food if not already as taught by

Wygat and Demerin and Sandberg to expand the usefulness of the method to other food products.

In regards to claims 23 and 34, the modified device of Hicks discloses wherein said determining said portion-cutting profile comprises the step of planning the whole of a cutting sequence (CP; col. 1, lines 50-52).

In regards to claim 24 and 35, the modified device of Hicks discloses wherein at least a part of said portion cutting profile is carried out in said first cutting stage (i.e the vertical or horizontal cutting; col1. lines 50-53)

In regards to claim 28 and 37, Hicks discloses wherein at least a part of said portion cutting profile (weight/ Height/ length) is communicated further to the second cutting stage (col. 2, lines 2-6).

In regards to claim 38, the modified device of Hicks discloses wherein said transporter is a conveyor (conveyor / turntable) for transferring one or more of the strips from the first cutting device to at least one (8') of the one or more additional cutting devices.

In regards to claim 32 and 39, the modified device of Hicks disclose the step of non-manually placing the flaccid food item in a first cutting device (6,7; the block weight 640 lbs; see col. 1, line13) and/or non-manually transferring the strips to one or more of the additional cutting devices.

In regards to claim 40, the modified device of Hicks discloses wherein a feeding direction of the one or more additional cutting devices are different from that of the first cutting device. In the first cutting device, the feeding direction is across the width of the

cheese and in the second cutting device the feeding direction is across the length of the cheese.

In regards to claim 41, the modified device of Hicks discloses an apparatus for portion cutting a flaccid food item into pieces of substantially rectangular shape, comprising: a first cutting device (6'/7') including first measuring means (weighting and centering station ; col. 1, lines 47-50) for scanning at least one of a shape, a structure and/or a dimension of the flaccid food item (weight, height, length); a processor (control processor; col.1, line 51) for determining a portion cutting profile (cut geometry) in connection with said scanning; a first cutting unit (metal wires) included in said first cutting device (6'/7') for cutting the flaccid food item into strips (layers 11') in accordance with said portion cutting profile; a transporter (conveyor/ turntable) for transporting said strips to one or more additional cutting devices and said one or more additional cutting devices(8'), said one or more additional cutting devices (8'), each comprising further measuring means (measuring the width; col. 2, lines 2-3) for scanning at least one of a shape, a structure and/or a dimension of the strips and a cutting unit for cutting the strips into substantially rectangular pieces ('3) of predetermined weight and/or dimension, wherein said portion cutting profile comprises determined dimensions and or weight for the cutting up of said flaccid food item into said strips and for the cutting up of said strips into said substantially rectangular pieces (col. 2, lines 54-58).

In regards to claim 43 and 44, the modified device of Hicks discloses a method for portion cutting a flaccid food item, comprising the steps of determining at least one physical attribute of the flaccid food item using a first measuring device (weighting and

centering station; col. 1, lines 47-50); determining, using a processor, (control processor; col.1, line 51) a portion cutting profile utilizing said at least one physical attribute of the food and a desired physical attribute;

first cutting the flaccid food item into strips (11') at the first cutting stage (6/7) by cutting in a first cutting direction (across the length of the block of cheese), said cutting performed in accordance with said portion cutting profile;

transporting (turntable) at least a portion of said strips to a second cutting stage (8');

after said transporting, determining at least one physical attribute of the at least a portion of the strips using a second measuring device (measuring the width);

and utilizing said at least one physical attribute of the at least a portion of the strips for second cutting said at least a portion of said strips into substantially rectangular pieces of the predetermined physical attribute at said second cutting stage by cutting in a second cutting direction (across the width of the cheese) (see col. 2, lines 2-6).

In regards to claim 45, the modified device of Hicks discloses wherein said second cutting direction (across the length) is substantially perpendicular to said first cutting direction (across the width).

In regards to claim 46, the modified device of Hicks discloses wherein said transporting includes changing a direction of travel of said strips (via the turntable). In regard to claim 47, the modified device of Hicks discloses wherein said transporter (turntable) changes a direction of travel of said strips (relative to the strips).

In regards to claims 48 and 49 as best understood, the modified device of Hicks discloses wherein said one or more additional cutting devices (1 device 8') has substantially parallel feeding directions (its parallel with itself) arranged such that each cutting stage cuts a different subset of said strips into pieces (the single cutting device cuts the strips, wherein the subset includes of all of strips). Applicant has not positively claimed a second cutting device.

In regards to claim 50, the modified device of Hicks discloses wherein said transporting includes changing a direction (relative to the strips) of travel of said strips (via turntable).

5. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hicks et al. (U.S. Patent 6,549,823), herein referred to as Hicks. In regards to claim 31, Hicks discloses the claimed invention except the step of manually placing the flaccid food items in the first cutting device or manually transferring the strips to a second cutting device. However, it is first noted that there are only two ways of transferring the flaccid food items from the first device to the second device; manually and non-manually. Utilizing one means or the other is a simple replacement of the only other available option. Hicks discloses the use of a turntable or non-manual movement of the flaccid food items from the first to second cutting stage. It would have been obvious to one having ordinary skill in the art at the time of the invention to have eliminated the turntable, for manual movement of the food product between one stage to the next to reduce the complexity of the cutting operation.

6. Claims 26 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hicks et al. (U.S. Patent 6,549,823), herein referred to as Hicks in view of Rosenberger (U.S. Publication 2002/0035905) and Vogeley Jr. et al. (U.S. Patent 5,937,080), herein referred to as Vogeley. In regards to claim 26 and 36, the device of Hicks discloses the claimed invention except wherein scanning of the shape, structure, and/or dimension of the strips is performed in the two or more additional cutting devices of the second cutting stage. Hicks already discloses scanning the length of the cheese before slicing it in the second cutting stage. Hicks only discloses a singular cutting device and doesn't disclose that there are two cutting devices. However, attention is directed to the Rosenberger and Vogeley references. Rosenberger discloses a method for subdividing a block of frozen foodstuff into small portions by a multi-stage sawing process. A conveyor system transports the foodstuffs between the saws and separates the cut portions along at least two parallel paths to maximize the processing of the foodstuffs thus the cutting loss is minimized and the yield of portions optimized. Vogeley discloses a means for optimizing the slabbing of meat and trimming fat from the slab by scanning and weighting the cross section of the slab. Vogeley discloses after first cutting the meat slab into the sections, the sections are placed on a conveyor traveling perpendicularly from the original cutting direction to the fat trimmer. As Hicks teaches that the cheese block can be used either as a whole or one layer 11' at a time (col.2 ,lines 6-7), and as Rosenberger teaches pushing multiple layers at a time and Vogeley also discloses conveying the sliced portions in a perpendicular direction, it

similarly would have been obvious to have applied the teachings of Rosenberger and Vogeley to the Hicks apparatus to have multiple layers being advanced through separate second cutting stations at the same time to increase the speed and yield of the cutting operation.

7. Claims 27 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hicks et al. (U.S. Patent 6,549,823), herein referred to as Hicks in view of Rosenberger (U.S. Publication 2002/0035905) and Vogeley Jr. et al. (U.S. Patent 5,937,080), herein referred to as Vogeley. In regards to claims 27 and 30, Hicks discloses the claimed invention except wherein a feeding direction of two or more additional cutting devices of the second cutting stage lies substantially at right angles to a feeding direction for a first cutting device. Hicks already discloses rotating the cheese block to present another face for slicing during the second cutting stage, but does not disclose that there are two cutting devices.

8. Claims 26 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hicks et al. (U.S. Patent 6,549,823), herein referred to as Hicks in view of Rosenberger (U.S. Publication 2002/0035905) and Vogeley Jr. et al. (U.S. Patent 5,937,080), herein referred to as Vogeley. In regards to claim 26 and 36, the device of Hicks discloses the claimed invention except wherein scanning of the shape, structure, and/or dimension of the strips is performed in the two or more additional cutting devices of the second cutting stage. Hicks already discloses scanning the length of the cheese

before slicing it in the second cutting stage. Hicks only discloses a singular cutting device and doesn't disclose that there are two cutting devices. However, attention is directed to the Rosenberger and Vogeley references. Rosenberger discloses a method for subdividing a block of frozen foodstuff into small portions by a multi-stage sawing process. A conveyor system transports the foodstuffs between the saws and separates the cut portions along at least two parallel paths to maximize the processing of the foodstuffs thus the cutting loss is minimized and the yield of portions optimized. Vogeley discloses a means for optimizing the slabbing of meat and trimming fat from the slab by scanning and weighting the cross section of the slab. Vogeley discloses after first cutting the meat slab into the sections, the sections are placed on a conveyor traveling perpendicularly from the original cutting direction to the fat trimmer. As Hicks teaches that the cheese block can be used either as a whole or one layer 11' at a time (col.2 ,lines 6-7), and as Rosenberger teaches pushing multiple layers at a time and Vogeley also discloses conveying the sliced portions in a perpendicular direction, it similarly would have been obvious to have applied the teachings of Rosenberger and Vogeley to the Hicks apparatus to have multiple layers being advanced through separate second cutting stations at the same time to increase the speed and yield of the cutting operation.

9. Claims 22-24, 27, 28, 30, 31, 32, 34-35, 37-41, 43,45, 46 and 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (U.S. Publication 2003/0145699), herein referred to as Kim in view of Sandberg et al. (U.S. Patent

7,450,247), herein referred to as Sandberg, Wadell (U.S. Patent 5,186,089) and Demerin (U.S. Patent 3,841,186).

Kim discloses a method for portion cutting a flaccid food item (food stuff 200) into pieces having a desired shape distribution, comprising the steps of: determining at least one physical attribute of the food item using a first measuring device (step 102); automatically determining an initial portion-cutting profile (step 103) utilizing said at least one physical attribute of the food item, said portion-cutting profile providing a cutting sequence for converting said food item into said desired shape distribution (step 108), said cutting sequence including a first plan for cutting said food item at the first cutting stage and a second plan for cutting the strips at a second cutting stage (step 116); first cutting the food item at the first cutting stage according to said first plan (fig. 3); transporting (conveyor 202) at least a portion of said strips to a second measuring device (224; fig. 5) located remotely from said first measuring device; after said transporting, determining at least one physical attribute of each one of the at least a portion of the strips using said second measuring device; automatically determining, using said second physical attribute, a verification or correction to said portion cutting profile to determine an updated second plan for obtaining said desired shape distribution (step 110); and performing, at a second cutting stage (different cutting station; see paragraph [0055]), a cutting of at least a portion of said strips into pieces based on said updated second plan, wherein said food item is ultimately transformed having said desired shape distribution at said second cutting stage, or at a subsequent cutting stage.

Kim discloses a first cutting stage plan and a second cutting stage plan for portioning a food item in all three dimensions, but does not specifically state determining at the first cutting stage a plan for cutting the food item into strips and a second plan for cutting the strips at a second cutting stage into pieces. However, portioning food items into pieces is well known in the art. Attention is directed to the the Sandberg, Wadell and Demerin references. Sandberg discloses another system for slicing meat where the meat is first measured by a profiling apparatus as similarly set forth by Kim and then sliced into segments of desired weight, but only discloses a first cutting sequence. Wadell also discloses an ultrasonic measuring device for measuring food stuffs, providing the information to a control unit which moves the cutting device into a position to cut the foodstuff and then to cut the foodstuff into portions. Demerin discloses a process for cutting pork breasts into pieces of variable size, but substantially equal weight, by adjusting the spacing of the cutters to first cut the breasts into slices and then into cubes. Thus between Sanberg, Wadell, and Demerin, it has been well established in the art to measure a food item for relative positioning of a cutting device for slicing and piece cutting the food into a desired portion and to combine both cutting steps on the same piece of meat. It would similarly have been obvious to one having ordinary skill in the art to have applied the teachings of Kim to cutting the meat product into first slices and then cubes for generating similarly sized pieces as taught by Sanberg, Wadell, and Demerin.

In regards to claim 52, the modified device of Kim discloses wherein said desired shape distribution of the pieces are rectangular pieces (cubes; see Wadell and Demerin).

In regards to claim 53, the modified device of Kim discloses wherein said second measuring device (224) is at said second cutting stage.

10. Claims 26, 36, 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (U.S. Publication 2003/0145699), herein referred to as Kim in view of Sandberg et al. (U.S. Patent 7,450,247), herein referred to as Sandberg, Wadell (U.S. Patent 5,186,089) and Demerin (U.S. Patent 3,841,186) and in further view of Rosenberger (U.S. Publication 2002/0035905)

In regards to claim 54, the modified device of Kim does not disclose wherein other portions of said strips are sent to additional measuring devices for converting the strips of said other portions of said strips into said desired shape distribution at other cutting stages. Attention is also directed to the Rosenberger reference. Rosenberger discloses a method for subdividing a block of frozen foodstuff into small portions by a multi-stage sawing process. A conveyor system transports the foodstuffs between the saws and separates the cut portions along at least two parallel paths to maximize the processing of the foodstuffs thus the cutting loss is minimized and the yield of portions optimized. It similarly would have been obvious to have applied the teachings of Rosenberger to the Kim apparatus to have each of the cut slices be pushed through parallel operating cutting blades to increase the speed and yield of the cutting operation.

It is also noted that the difference between Kim and the claimed invention is the duplication of an already established set up such where it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. It similarly would have been obvious to one having ordinary skill in the art to have provided additional measuring devices for converting said other portions of said strips of Kim into said desired shape distribution at other cutting stages to increase the speed and throughput of the operation as at least shown by Rosenberger.

Response to Arguments

11. Applicant's arguments filed 5/02/2012 have been fully considered but they are not persuasive. The applicant argues that Hicks is for cutting hard cheese and therefore does not disclose a method of cutting a flaccid food item. However, Hicks discloses that various cheese products can be cut. Attention is also directed to the Wygal, Demerin and Sandberg references that establish that multiple food items are known in the art to require portion and cube cutting and that it would have been obvious to have applied the measuring techniques of Hicks to an even softer food item.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAURA M. LEE whose telephone number is (571)272-8339. The examiner can normally be reached on Monday through Friday, 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on (571) 272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/LAURA M LEE/
Primary Examiner, Art Unit 3724